

US-PAT-NO: 4962520

DOCUMENT-IDENTIFIER: US 4962520 A

TITLE: Composite ringing and coin control voltage detector and
method

----- KWIC -----

Application Filing Year - AY (1):
1989

Brief Summary Text - BSTX (9):

As can be seen in FIG. 1, the ringing signal, which is applied to the ring and tip lines, is nominally a 20 Hz, 100 VRMS signal. This AC signal is superimposed on either the positive battery voltage +48 VDC, which is shown as signal 14 (+R or +T), or the negative voltage -48 VDC, or signal 16 (-R or -T). This offset is attributable to the +48 VDC battery source in a telephone system. The AC ringing signals 14 and 16 have a maximum signal level of 120 VRMS, as indicated by dashed lines 22 and 26, respectively, and a minimum signal level of 70 VRMS, as indicated by dashed lines 24 and 28, respectively.

Detailed Description Text - DETX (3):

Referring to FIG. 2, an equalized negative ringing signal 44 (-Teq) is shown in dashed lines with its corresponding maximum and minimum signals 46 and 48 (-Teqmax and -Teqmin). As can be seen, -Teq is offset by -96 VDC, or an additional -48 VDC but has substantially the same peak-to-peak amplitude. This is the result of the selective amplification by the equalization circuit of the DC component of -T, or the -48 VDC battery voltage. The AC component (100 VRMS at 20 Hz) retains substantially the same peak-to-peak voltage level.

Current US Original Classification - CCOR (1):
379/29.05

L Number	Hits	Search Text	DB	Time stamp
1	23980	negative same battery	USPAT	2003/07/25 11:01
2	16743	ringing	USPAT	2003/07/25 11:04
3	173	ringing same (negative same battery)	USPAT	2003/07/25 11:04
4	127	((ringing same (negative same battery)) and 379/\$.ccls.	USPAT	2003/07/25 11:04
5	126	((ringing same (negative same battery)) and 379/\$.ccls.) and @ay<=1998	USPAT	2003/07/25 11:05